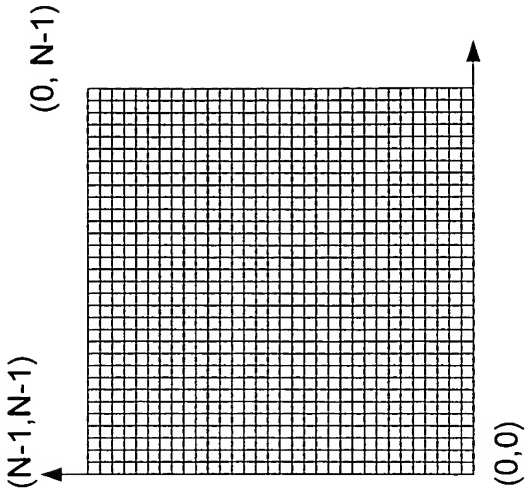


FIG. 1B

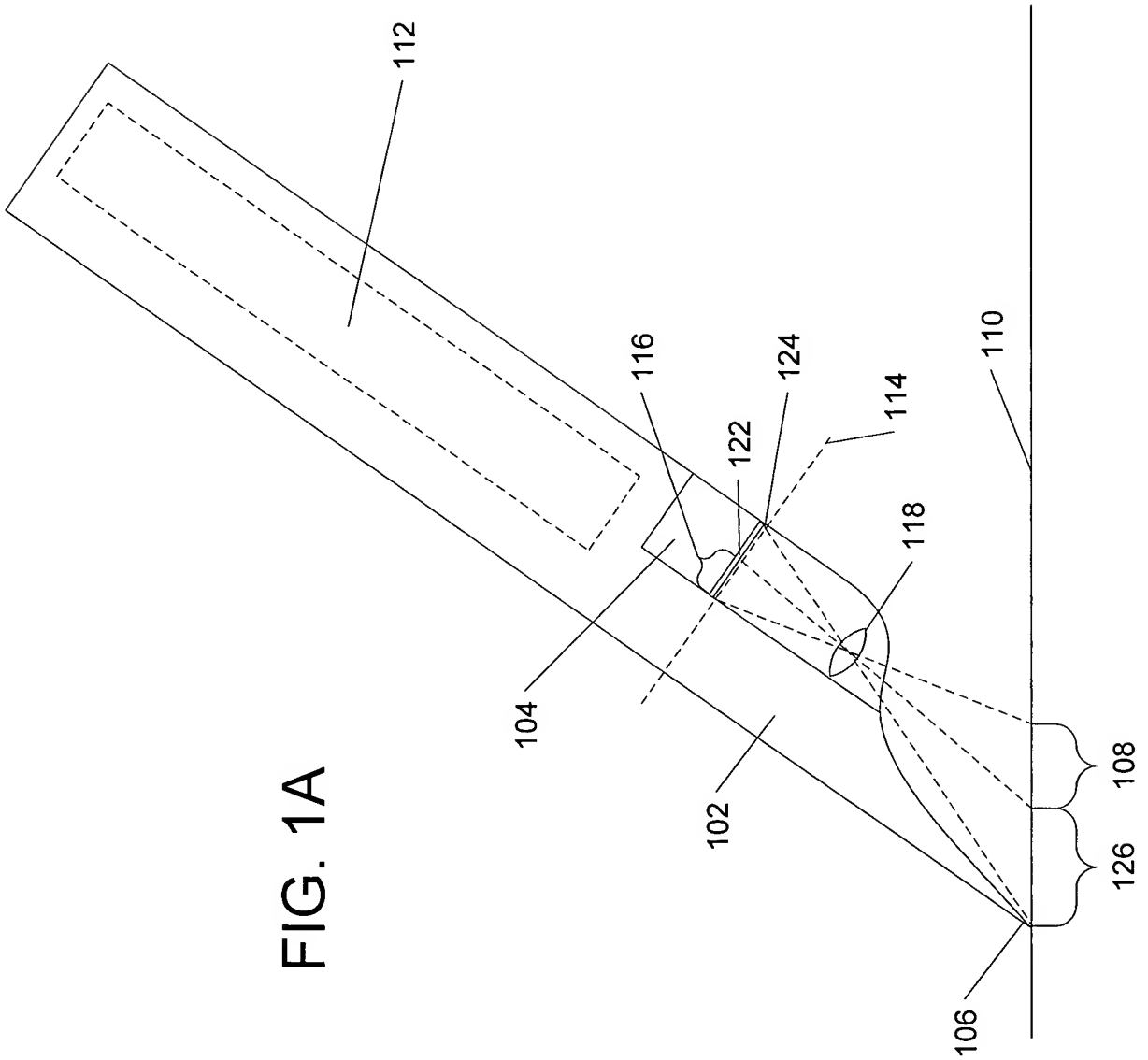


FIG. 1A

$$\begin{bmatrix} 0 & 1 & 0 & 0 & 0 & 1 & 1 & 1 & 1 & 0 \\ 1 & 1 & 1 & 0 & 1 & 1 & 0 & 0 & 1 & 0 \\ 0 & 0 & 1 & 1 & 1 & 0 & 0 & 1 & 1 & 1 \\ 1 & 0 & 1 & 1 & 0 & 0 & 1 & 1 & 0 & 0 \end{bmatrix}$$

FIG. 2

FIG. 3A

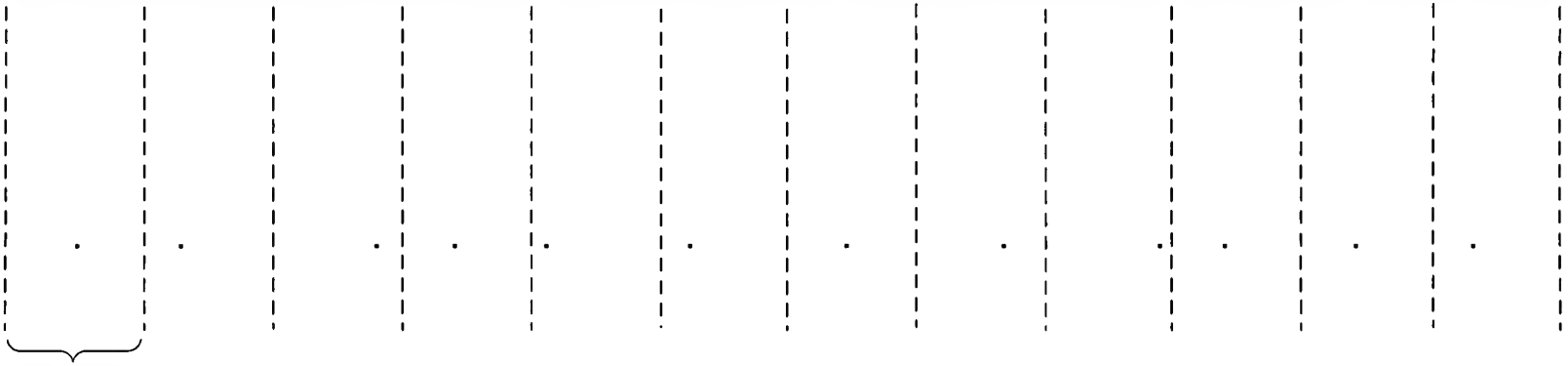
ORDERED SEQUENCE OF DIGITS DIVIDED INTO SEQUENTIAL WINDOWS:

100 | 110 | 001 | 101 | 111 | 110 | 100 | 010 | 000 | 101 | 100 | 101

Wseq

THE Y SET REPRESENTED AS AN ARRAY/MATRIX OF SYMBOLS WITHIN SURFACE WINDOWS:

(00010000, 01000000, 00000010, 00100000, 10000000, 01000000, 00010000, 00000100, 00000001, 00100000, 00010000, 00100000)



Wsurface

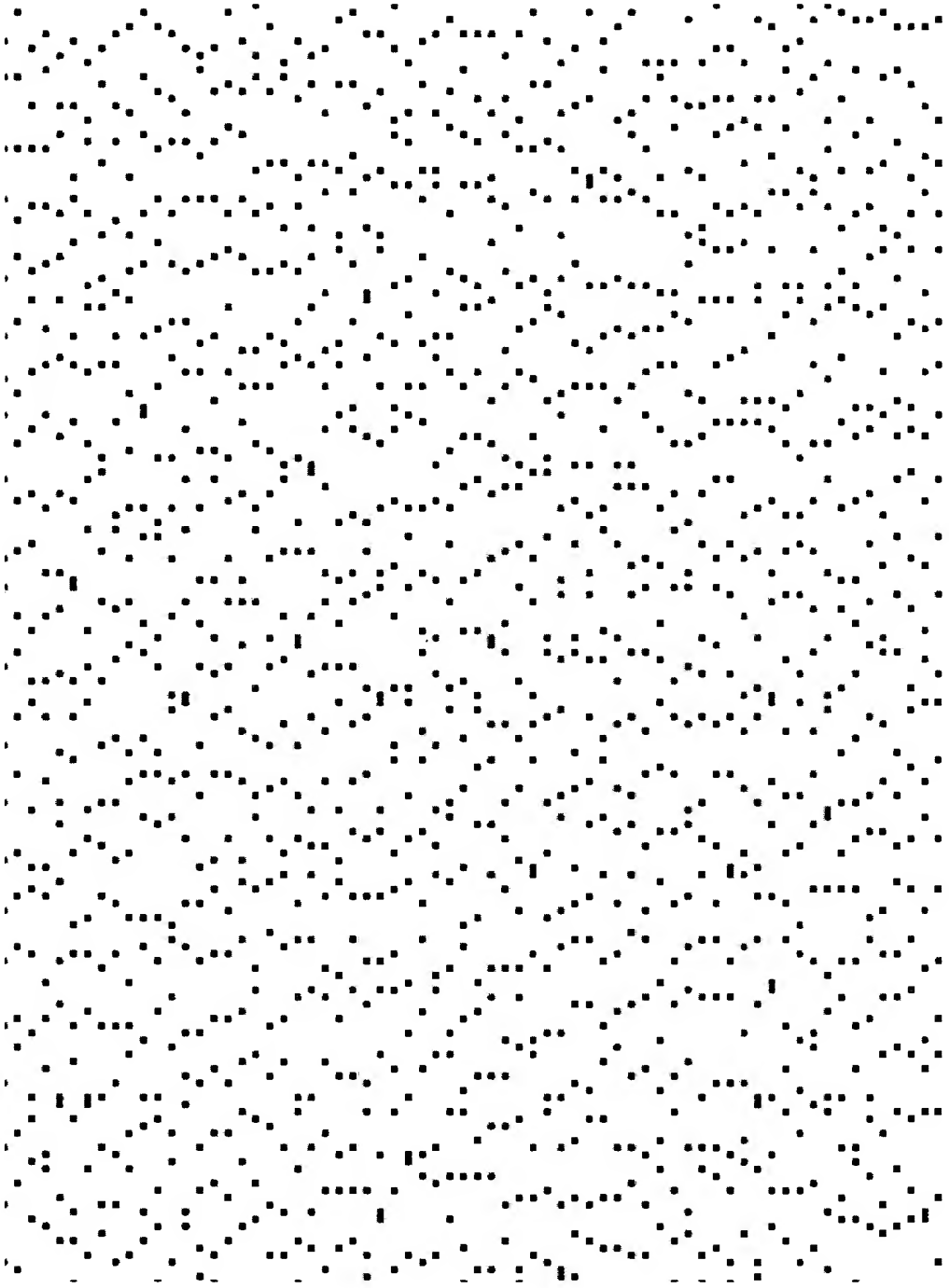


FIG. 3B

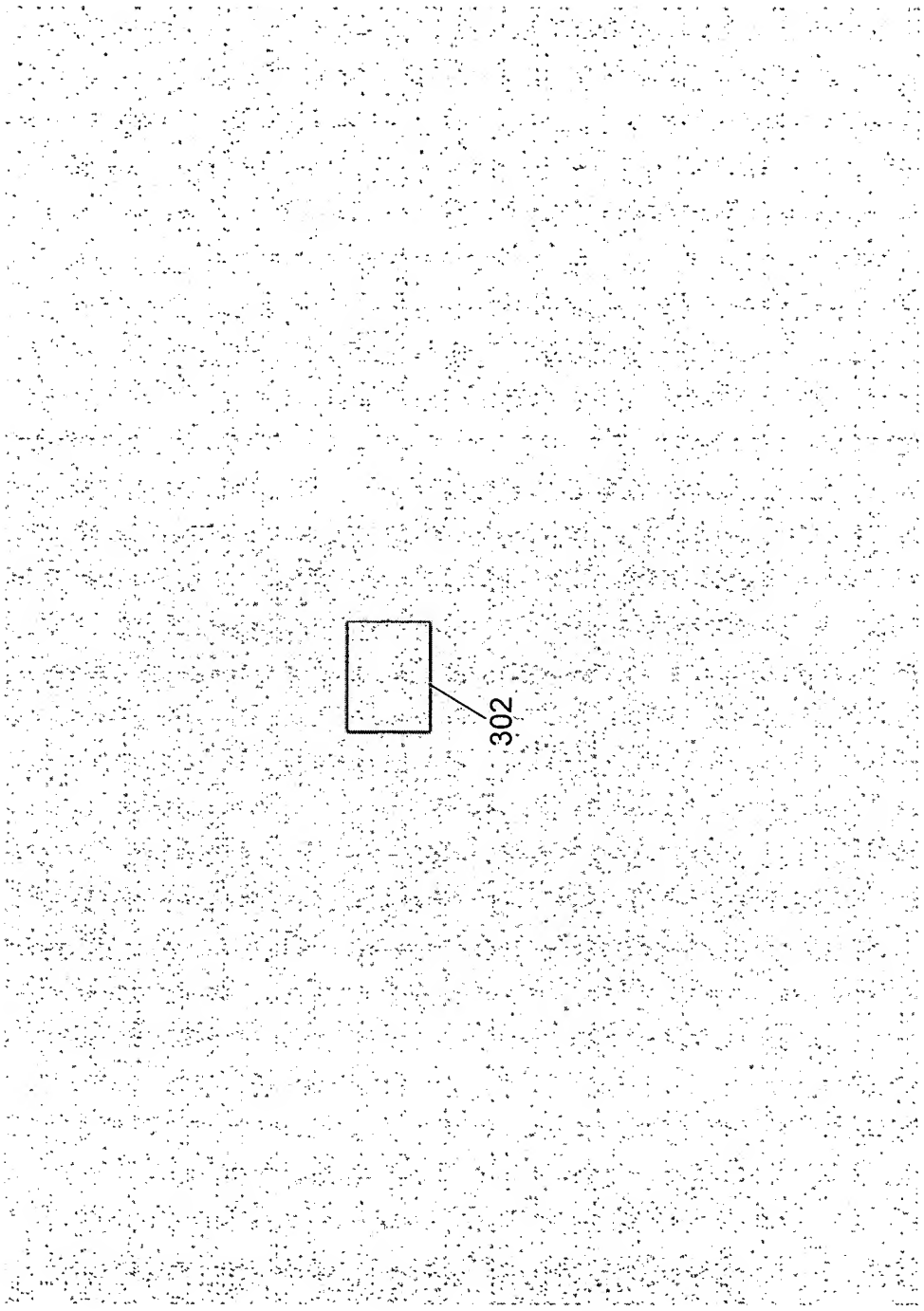


FIG. 3C

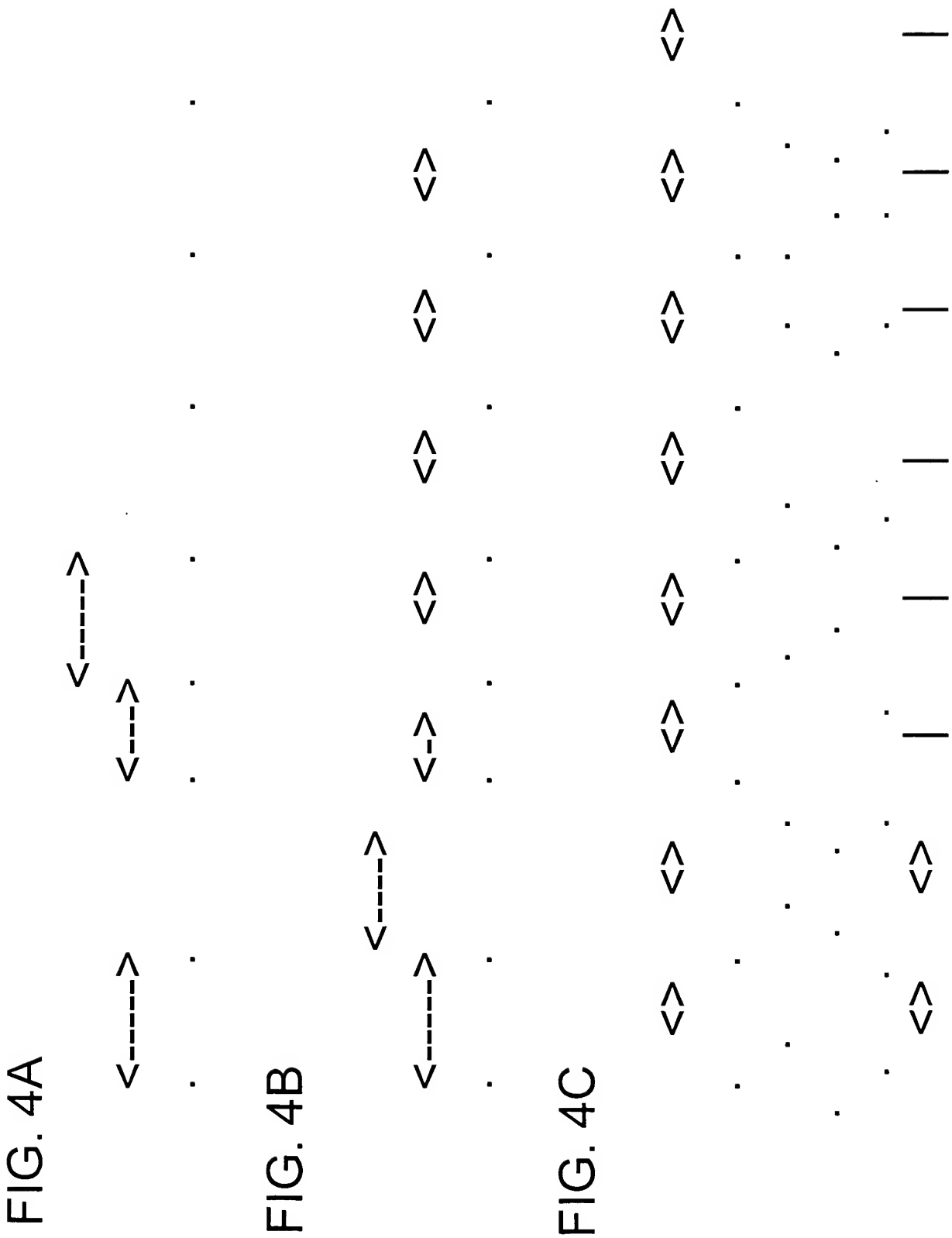


FIG. 4A

FIG. 4B

FIG. 4C

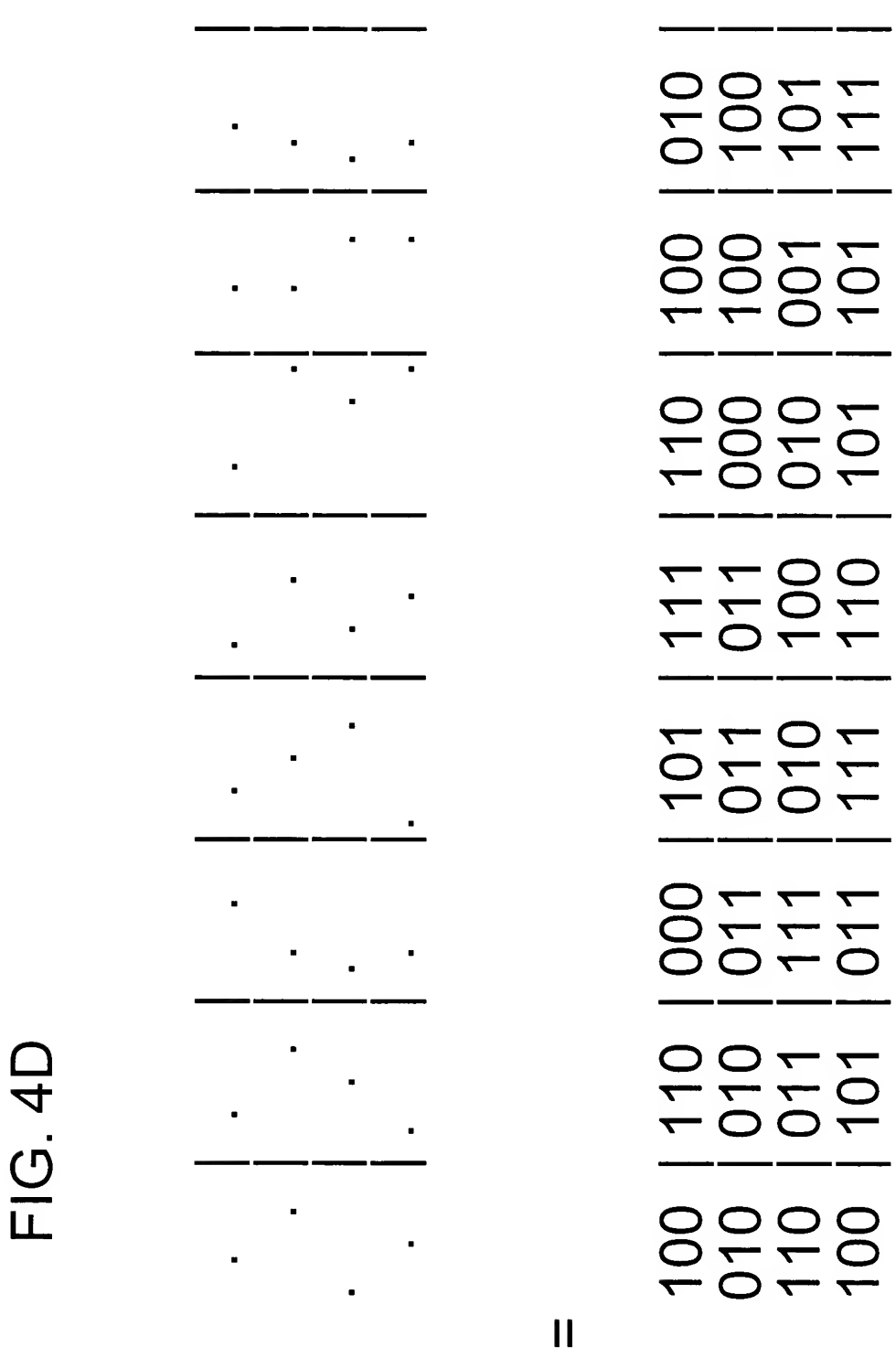
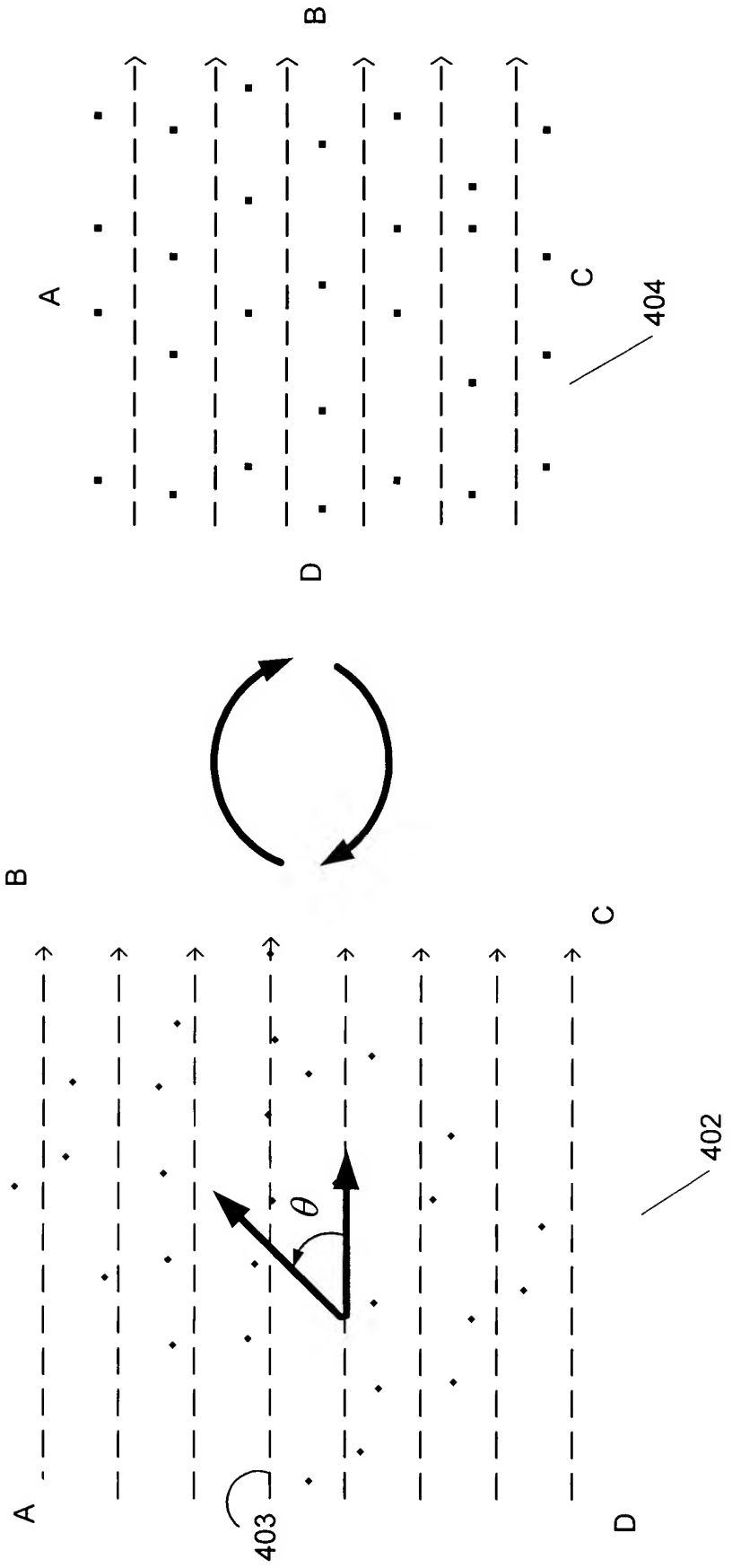

100 | 110 | 000 | 101 | 111 | 110 | 000 | 010
010 | 010 | 011 | 011 | 011 | 011 | 100 | 100
110 | 011 | 111 | 010 | 100 | 000 | 001 | 101
100 | 101 | 011 | 111 | 110 | 010 | 101 | 111

FIG. 4D

FIG. 4E



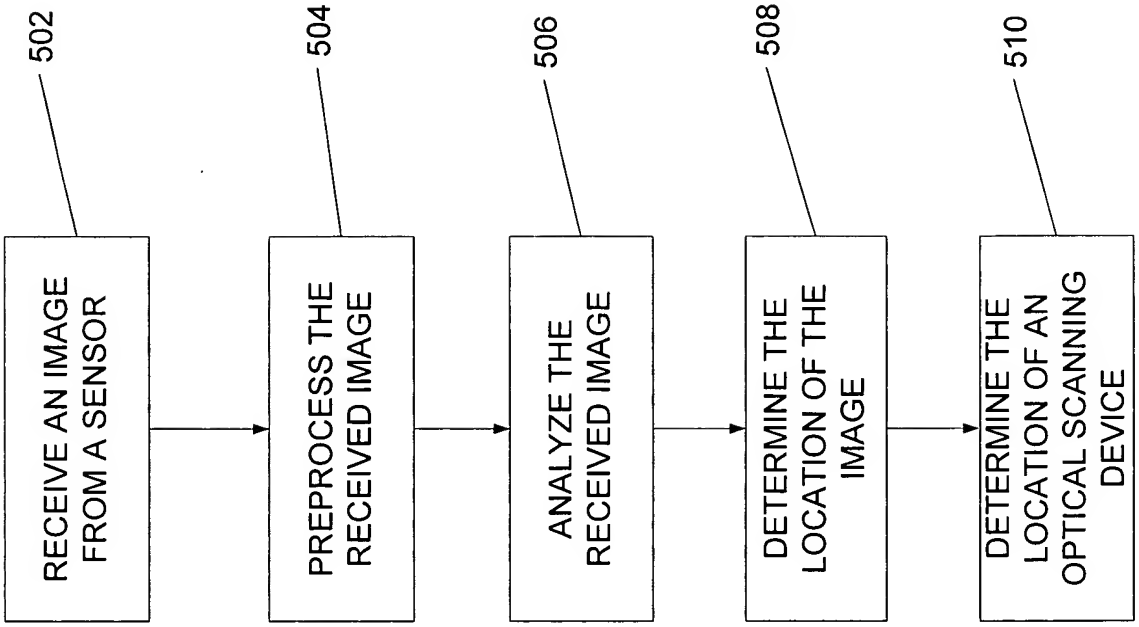
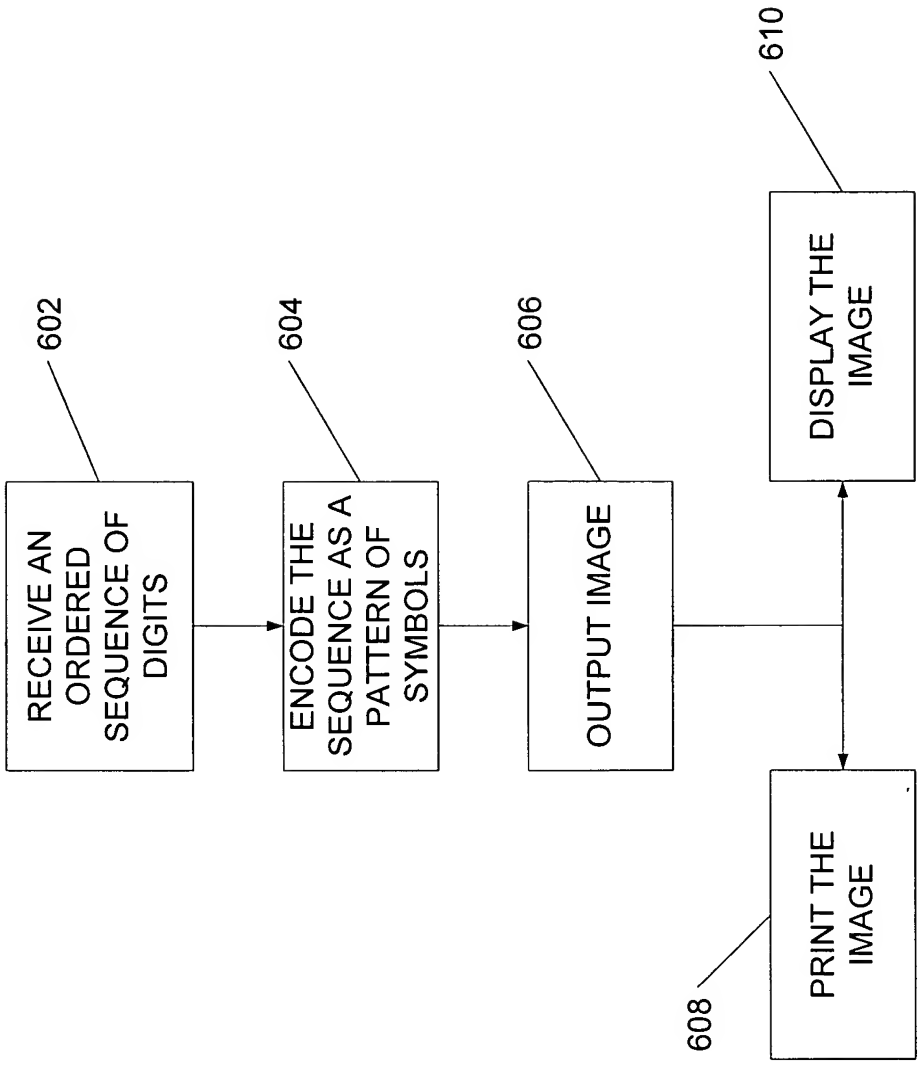

502
RECEIVE AN IMAGE FROM A SENSOR
504
PREPROCESS THE RECEIVED IMAGE
506
ANALYZE THE RECEIVED IMAGE
508
DETERMINE THE LOCATION OF THE IMAGE
510
DETERMINE THE LOCATION OF AN OPTICAL SCANNING DEVICE

FIG. 5

FIG. 6


602
RECEIVE AN ORDERED SEQUENCE OF DIGITS
604
ENCODE THE SEQUENCE AS A PATTERN OF SYMBOLS
606
OUTPUT IMAGE
610
DISPLAY THE IMAGE
608
PRINT THE IMAGE

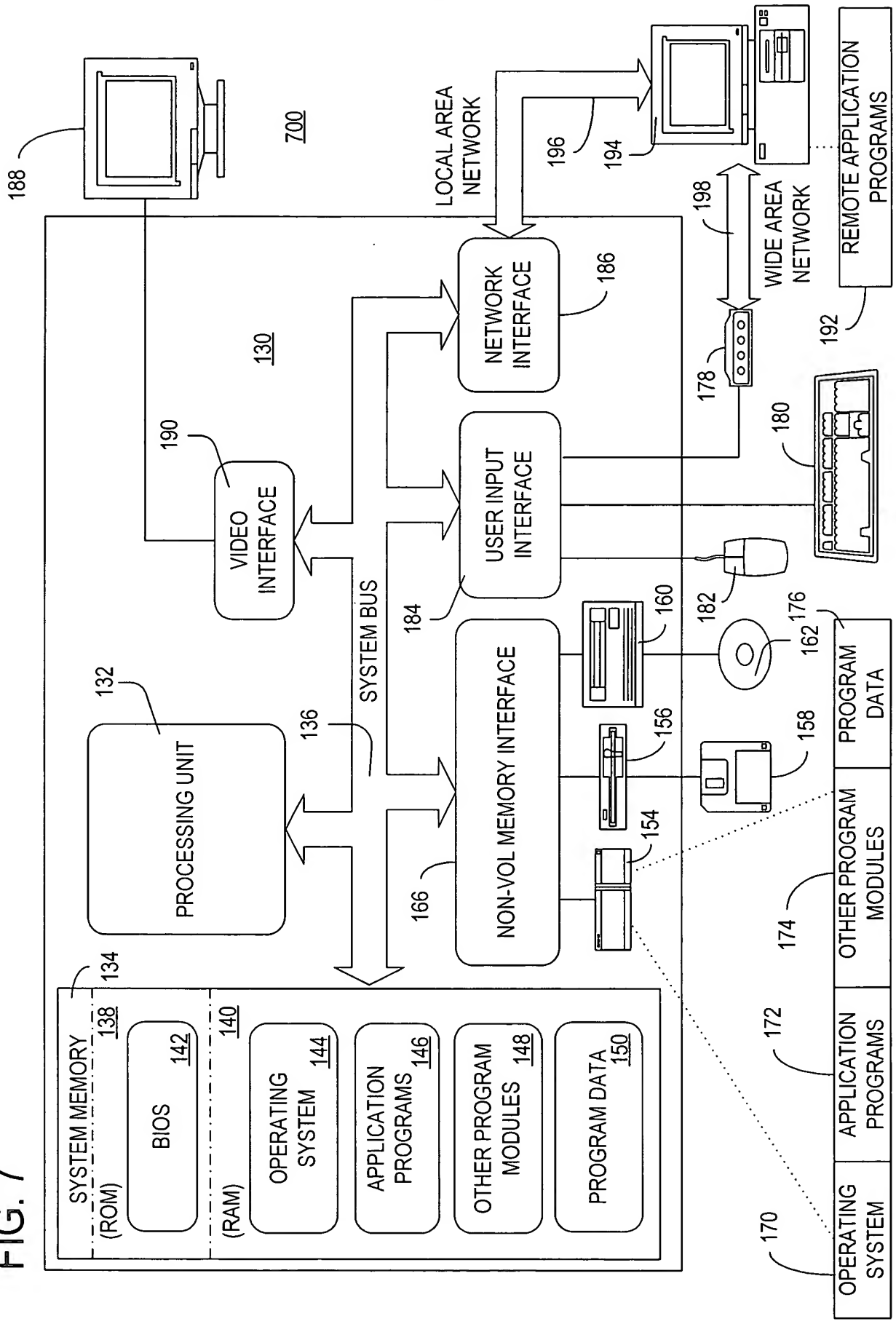

700
188
LOCAL AREA NETWORK
196
194
198
WIDE AREA NETWORK
REMOTE APPLICATION PROGRAMS
192
130
NETWORK INTERFACE
186
190
VIDEO INTERFACE
USER INPUT INTERFACE
178
180
182
184
SYSTEM BUS
132
PROCESSING UNIT
136
NON-VOL MEMORY INTERFACE
160
162
176
156
158
154
166
174
OTHER PROGRAM MODULES
PROGRAM DATA
172
APPLICATION PROGRAMS
170
OPERATING SYSTEM
134
SYSTEM MEMORY
138
(ROM)
BIOS
142
140
(RAM)
OPERATING SYSTEM
144
APPLICATION PROGRAMS
146
OTHER PROGRAM MODULES
148
PROGRAM DATA
150

FIG. 7